



ಬಿ.ಎಂ.ಎಸ್. ತಾಂತ್ರಿಕ ಮತ್ತು ವ್ಯವಸ್ಥಾಪನಾ ಮಹಾವಿದ್ಯಾಲಯ

BMS INSTITUTE OF TECHNOLOGY & MANAGEMENT

(Autonomous Institution Under VTU)

Yelahanka, Bengaluru -560119

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

LIVEWIRE!

JULY 2024 - DECEMBER 2024

VOLUME 7 | ISSUE 2

A BI-ANNUAL NEWSLETTER

We are glad to present Volume 7, Issue 2 of Livewire!, the Electrical and Electronics Engineering department newsletter. This issue contains reports regarding departmental advisory board meeting as well as reports on the various activities conducted with the objective of overall student development by the EEE Department, BMSIT & M. This issue also consists of technical, non-technical articles and other creative work by the students of the department



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Late Sri B. M. Srinivasaiah
Founder, BMSCE



Late Sri B. S. Narayan
Founder, BMSET

Promoting prosperity of mankind by augmenting human resource capital through quality education and training

Institution

Vision:

- To emerge as one of the finest technical institutions of higher learning, to develop engineering professionals who are technically competent, ethical and environment friendly for betterment of the society.

Mission:

- Accomplish stimulating learning environment through high quality academic instruction, innovation and industry-institute interface.

E&EE Department

Vision of the Department:

- To emerge as one of the finest Electrical & Electronics Engineering Departments facilitating the development of competent professionals, contributing to the betterment of society.

Mission of the Department:

- Create a motivating environment for learning Electrical Sciences through teaching, research, effective use of state-of-the-art facilities and outreach activities.

EDITORIAL TEAM



CHIEF EDITOR
Dr. Prashant A Athavale
HoD, Assistant Professor



EDITOR
Mr. Vikram Chekuri
Assistant Professor

NOTE FROM THE EDITOR

We are pleased to announce the release of Volume 7, Issue 2 of Livewire!, the esteemed newsletter of the Electrical and Electronics Engineering Department, BMSIT&M. In this issue, readers will find an in-depth account of the recent Departmental Advisory Board meeting, which addressed key priorities for academic advancement and set forth new directions for the department's future. These insights underscore the department's ongoing efforts to maintain high standards in both curriculum and student support.

The newsletter further chronicles a diverse array of activities and initiatives conducted by the department, all geared toward fostering the comprehensive growth of students. Featured events range from technical workshops and guest lectures to outreach initiatives and student-led competitions. Each report illustrates the vibrant academic culture and strong sense of collaboration that define the EEE Department at BMSIT&M.

Rounding out this edition are sections dedicated to technical articles, non-technical explorations, and creative works crafted by our talented students. Whether through innovative project write-ups, thought-provoking essays, or artistic contributions, this issue of Livewire! serves as a testament to the enthusiasm and multifaceted abilities of our student community. We invite readers to engage with this variety of content as we continue celebrating the achievements and creative spirit of our department.

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STUDENT ACHIVENMENTS



Hemanth, P Pranava Chandra, Ajay D bhat, Rohan of 3rd and 5th Sem EEE secured 2nd place in "Anveshana-Ideathon," the most prestigious competition organized by IIC, BMSITM held on 18.12.2024, for the idea, "SeaBin," which aims to simplify cleaning of the water bodies and helps government for the easy clean of different water bodies.

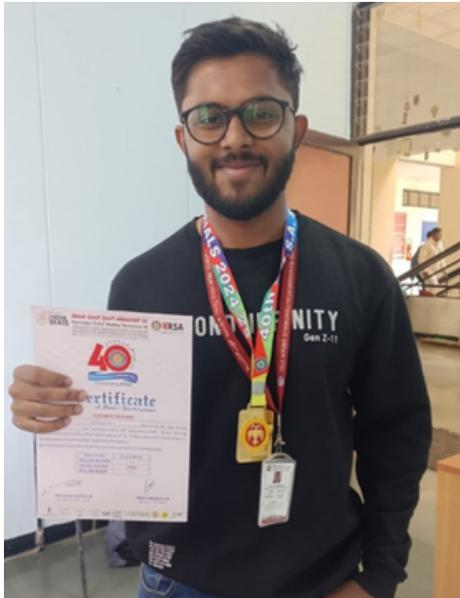
Aishwarye Jain and team of 5th Sem EEE secured 3rd place in "Anveshana-Ideathon," the most prestigious competition organized by IIC, BMSITM held on 18.12.2024.



Aishwarye Jain and team of 5th Sem EEE secured 2nd place in the EPOCH'24 (HACKATHON conducted by AIML and CSBS Department) held on 06.12.2024 and 0.12.2024. For the idea, "Mental and Health Support Companion" which was well-received, the team was awarded a cash prize of ₹2000.

STUDENT ACHIEVEMENTS

Shreya G S, Deepanshu Bhardwaj, and Dr Prashant Athavale presented a paper titled "Deep learning based environmental sound classification" in the 2nd IEEE International conference on Networks, Multimedia and Information Technology during 9th and 10th August 2024 organized in association with IEEE Bangalore at Nitte Meenakshi Institute of technology Bangalore. The paper received the Best Paper Award during the conference.



MR SAMARTH SRINIVAS

Mr Samarth Srinivas of 5th Sem EEE participated in 40th Karnataka State Roller Skating Championship & Selection Trials 2024 held in December 2024 and won GOLD in INLINE Hockey.



AISHWARYE JAIN AND TEAM



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- Aishwarye Jain and team of 5th Sem EEE secured 3rd place in "Anveshana-Ideathon," the most prestigious competition organized by IIC, BMSITM held on 18.12.2024. For the idea, "AI-Driven Smart Wardrobe," which aims to simplify outfit selection using AI based on personal preferences, occasions, and external factors like weather.

BOS MEETING



The First BoS meeting of the Electrical and Electronics Engineering Department, BMSIT&M was held on 23.08.2024 from 10.00 am onwards at the Seminar Hall -2. Dr. Prashanth Athavale, HoD EEE, welcomed all the BoS members, faculty and staff members of EEE. He presented the agenda of meeting, which presented the scheme and syllabus of 7th and 8th semester, 2021 scheme; scheme and syllabus of 5th and 6th semester, 2022 scheme; scheme and syllabus of 1st and 2nd semester, 2024 scheme.

EXPERT TALKS

Department of Electrical and Electronics Engineering organized an expert talk on the topic “Job opportunities at VLSI/Semiconductor industry” for 7th semester students on 19.10.2024. The speaker Mr. Santhosh of Synopsys covered the topic on basics of VLSI and job opportunities in VLSI industry for students of EEE/ECE/ETE. He spoke about his journey as a EEE student and how he landed in a job at VLSI domain and the requirements to obtain a job with electrical science background. Mr. Pradyoth of IBM gave insight of the VLSI design cycle with various steps of specifications, architecture, design verification, functional verification, synthesis, physical design, design validation and finally fabrication and packaging in an interesting way by making students interactive in the session. The activity was coordinated by Dr. Suma Umesh and Prof. Manjula B.K.



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- Department of Electrical and Electronics Engineering organized one day workshop on “Standardization of Power capacitors” for 3rd sem and 5th sem students on 05.12.2024. Mr. Maharana, Director & head (ETD), BIS gave the welcome address. He said that BIS is eager to have MOUs with colleges such as BMSIT&M, to propagate the knowledge about Standards to as many people as possible and instil the culture of quality and standardization. Dr. Bhavani Shankar T, Additional Director, CPRI, spoke about how the day's program will throw some light about the use of capacitors and how they are standardized. Shri. Nitish Kr. Jain, Dy. Director, BIS gave an overview of the power capacitors, the structure of the establishment and the stake holders involved at BIS. Dr. Ravindra Kumar Sharma, Scientific Officer/G, BARC and Shri. V Vaidhyanathan, Engineering Officer, CPRI have emphasized on importance of power capacitors standardization. Dr. Sanjay Lakshminarayanan and Prof. H.D. Kattimani of EEE were the chief co-ordinators.



05-12-2024

INDUSTRY – INSTITUTE INTERACTION

- An industrial visit was arranged by the Department of Electrical and Electronics Engineering for 1st semester students to Visvesvaraya Industrial and Technological Museum, Bengaluru on 06.11.2024. The museum emphasized on interactive learning and its diverse range of exhibits made it a valuable resource for students. The visit provided a comprehensive understanding of the evolution of industrial and technological advancements in India. The students were accompanied by Prof. H.D. Kattimani, Prof. Manjula B.K and Prof. Vikram Chekuri.
- Department of Electrical and Electronics organized an industrial visit to State Load Dispatch center (SLDC), Bengaluru on 12.12.2024. Total 41 students of 7th semester were accompanied with 3 faculty members (Dr.Madhu Palati, Dr. Prashanth N A and Prof H.D. Kattimani) visited the SLDC. Under the guidance of the Engineer Shailashree, the students were taken to different sections in the control center where they observed the SCADA system. The students had a great experience in visiting the SLDC and some of the key learnings from this visit are Grid Operations and Management, SCADA and EMS Technologies, Integration of Renewable Energy, Load Forecasting and Scheduling, Grid Safety and Security.



05-12-2024



05-12-2024

PUBLICATION OF RESEARCH PAPERS BY THE FACULTY MEMBERS

International Conference

August

- Hussaian Basha, C., Manjunatha Babu, P., Velpula, S., Fathima, F., Prashanth, V. (2024). A New Way of Optimal Scheduling of Virtual Energy Storages for Microgrids Regulation. In: Tiwari, R., Saraswat, M., Pavone, M. (eds) Proceedings of International Conference on Computational Intelligence. ICCI 2023. Algorithms for Intelligent Systems. Springer, Singapore. https://doi.org/10.1007/978-981-97-3526-6_45.
- Manjunatha Babu, P., Gurucharan, B., Prathiba, M., Sai Rassmi, M., Shastry, V.B. (2024). A Real-Time Hand Gesture Recognition System Using Image Processing. In: Asokan, R., Ruiz, D.P., Piramuthu, S. (eds) Smart Data Intelligence. ICSMDI 2024. Algorithms for Intelligent Systems. Springer, Singapore. https://doi.org/10.1007/978-981-97-3191-6_36.
- Manjunatha Babu, P., Sai Rassmi, M., Gurucharan, B., Prathiba, M., Shastry, V.B. (2024). Smart Traffic Signal Control for Emergency Vehicles. In: Asokan, R., Ruiz, D.P., Piramuthu, S. (eds) Smart Data Intelligence. ICSMDI 2024. Algorithms for Intelligent Systems. Springer, Singapore. https://doi.org/10.1007/978-981-97-3191-6_35.

September

- Gugulothu Babu Naik, Sanjay Lakshminarayanan, Madhu Palati, Suresh Haleyr Lakshmegowda, and Mahipal Bukya. "A study of XLPE insulation failure in power cables under electromagnetic stress", Engineering Research Express 6, no. 3 (2024): 035352.

October

- Palati, Madhu, R. Dharshan, Piyush Kumar Pattnaik, G. R. Nisarga, and Vineeth R. Harthikote. "Smart Water Leakage Alert System for Residential Buildings." In 2024 5th International Conference on Electronics and Sustainable Communication Systems (ICESC), pp. 357-362. IEEE, 2024. (Scopus)
- Prashanth, N. A., and Madhu Palati. "Design and Implementation of DC-AC-DC High Frequency Converter in MATLAB/Simulink." In 2024 5th International Conference on Electronics and Sustainable Communication Systems (ICESC), pp. 253-257. IEEE, 2024. (Scopus)
- Shreya, G. S., Dipanshu Bhardwaj, and Prashant A. Athavale. "Deep Learning Based Environmental Sound Classification." In 2024 Second International Conference on Networks, Multimedia and Information Technology (NMITCON), pp. 1-6. IEEE, 2024. (Scopus)

November

- Palati, Madhu, Mahipal Bukya, Rajesh Kumar, and Akhilesh Mathur. "A Novel Method to Detect the Faults in an Underground Cable Using Robot." In International Conference on Computation of Artificial Intelligence & Machine Learning, pp. 346-355. Cham: Springer Nature Switzerland, 2024. https://doi.org/10.1007/978-3-031-71484-9_29

BOOK CHAPTERS

September

- Dr. Manjunatha Babu P Published book chapter in Electrocatalytic Materials "A Novel on Performance Analysis of Proton Exchange Membrane Fuel Cell System with Metaheuristic Optimization Based MPPT Controller, pp 499-513, Springer publication, 14.09.2024.

ALUMNI INTERACTION

- Department of Electrical and Electronics Engineering organized an alumni talk on the topic “Real-world insights, Career advice, and Valuable Networking opportunities” for the 4th and 6th semester students on 22.07.2024. Mr. Vishnu S is an Alumni of 2023, currently PG student, University of New York. He gave the students information on how to prepare ready for the tough MS tests, how to obtain a visa, what money is needed, when and how to apply to different universities, how to handle living abroad, and the possibility of earning internships while pursuing an MS. After then, the conversation was available to the students.



22-07-2024



17-12-2024

- Department of Electrical and Electronics Engineering organized an Alumni talk on “Mathematical Foundations, Risk Management, Algorithmic Trading and Skill Development” for 3rd semester students on 17.12.2024. Alumnus Mr. Keenan Santiago Dsouza, 2024 Graduated Batch spoke about the exciting world of quantitative finance, examining the critical role that engineers, particularly those with a background in electrical engineering, play in this rapidly evolving field. The event was coordinated by Dr. Manjunatha Babu P and Mr. Ozwin Dominic Dsouza.

SPORTS

Abhyuday Akasi Reddy

- Cicada 2024 - Held at Atria University, Hebbal, Bengaluru - on 7th & 8th November 2024
- Participated in Hackathon, Treasure Hunt (secured 3rd place), and Cricket Auction
- Epoch Hackathon - Conducted at BMSIT&M, Yelahanka, Bengaluru - on 6th & 7th December 2024
Reached top 3 by clearing all 3 levels of the hackathon
- Phase Shift - BGMI Event - Organized at BMS College of Engineering, on 5th & 6th December 2024
- Participated in gaming competition (BGMI)



7-11-2024



7-12-2024



3-10-2024

Bhargav M V Excels at Falak'24

Bhargav M V (USN: 1BY24EE400), a 4th-semester EEE student, secured 2nd place in Shuttle Badminton at Falak'24, the MIT intercollegiate tournament held from 1st to 3rd October 2024

Lokaksha V

Lokaksha V has had an impressive run in cricket during the academic year 2024–25, showcasing exceptional talent and leadership:

- Represented BMSIT&M in both the VTU North Zone and VTU State Level Interzone cricket tournaments for 2024–25.
- Was the highest run-scorer for BMSIT&M in the 2023–24 VTU North Zone and Interzone tournaments.
- Captained SOCIAL CRICKETERS, a Division-1 cricket club, in the U-19 category.
- Scored over 350 runs in the U-19 KSCA League for SOCIAL CRICKETERS.
- Selected to represent Bangalore City XI in the KSCA U-19 Interzonal Tournament.



12-7-2024

Ms. Kavya Wins Bronze at VTU Karate Championship

Ms. Kavya secured a Bronze Medal in the under 50 kg weight category at the VTU State Level Karate Competition (Men & Women) held on 26th September 2024 at BIT, Bengaluru. Congratulations on her outstanding performance!



26-09-2024

ANY OTHER INITIATIVES BY THE DEPARTMENTS

- Manjula B K. Assistant Professor, Department of Electrical and Electronics Engineering attended an ATAL FDP on “Empowering Futuristic Research Avenues in Energy, Sustainability & Climate Change for Industrial Innovations” at Sir MVIT, Bangalore from 11.11.2024 to 16.11.2024.

Manjula B K. Assistant Professor, Department of Electrical and Electronics Engineering Presented a research paper on “Smart Card Based EV Parking system using DC Charging” at IEEE conference of NIT Patna, EEE department on 23.11.2024 in online mode.

Manjula B K. Assistant Professor, Department of Electrical and Electronics Engineering Completed a 12 week NPTEL course on “Smart Grid: basic to Advanced Technologies conducted by IIT Roorkee from July to October 2024 with a score of 87%. Awarded with Elite Silver for being the topper of the course.

AC/DC CLUB



- The AC/DC TECH Skill Enhancement Club, established under the Department of Electrical and Electronics Engineering, BMSITM. Aim to bridge the gap between academic learning and practical industry requirements. Our mission is to provide students with industry-level exposure, real-world problem-solving opportunities, and hands-on experience with advanced tools and technologies.

Objectives:

1. To familiarize the members with industry level exposure and real-world problem statements.
2. To Build a cordial relationship between the various semesters/branches' students.
3. To involve alumni by organizing various sessions, events, and workshops.

- ATAL FDP: Dr.Madhu Palati has successfully participated & completed AICTE Training And Learning (ATAL) Academy Faculty Development Program on Power Electronics Applications in Microgrid using AI (peamgai -2024) at JAIN DEEMED TO BE UNIVERSITY FACULTY OF ENGINEERING AND TECHNOLOGY from 09.12.2024 to 14.12.2024.

Faculty Review:

- Dr. Madhu Palati received Certificate of reviewer In recognition of the review made for the journal " Applied Science and Engineering Progress" Awarded by Academic Enhancement Department, King Mongkut's University of Technology North Bangkok (KMUTNB).
- Dr. Madhu Palati received certificate of appreciation for reviewing the conference papers Reviewer at the "2nd International Conference on Intelligent and Sustainable Power and Energy Systems (ICISPES-2024)" held on 13th and 14th December 2024, organized by the Department of Electrical and Electronics Engineering, Dayananda Sagar College of Engineering, Bengaluru, India.

- Alumni Meet: The 10th AGM and Annual Alumni meet was conducted on 21.12.2024 at B S Narayan Auditorium, were some of the Electrical Alumni taken part.



21-12-2024

- Anveshana Ideathon: Rohan of 5th sem participated in Anveshana Ideathon held on 18.12.2004, conducted by IIC, BMSIT&M.